CLAIM AMENDMENTS

1. (Previously Cancelled).

2. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein said reaction is conducted in the presence of at least one solvent or co-solvent.

3. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20, ~~wherein~~ said silica ~~film is a nanoporous dielectric film~~ having a pore structure that comprises silanols, and wherein said reaction is conducted for a period of time sufficient for said surface modification agent to produce a treated nanoporous silica film having a dielectric constant of about 3 or less.

4. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 3 ~~that produces a nanoporous silica film~~ having a dielectric constant ranging from about 1.1 to about 3.0.

5. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein said reaction is conducted at a temperature ranging from about 10°C to about 300°C.

6. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein said reaction is conducted for a time period ranging from about 10 seconds to about 1 hour.

7. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein said surface modification agent is a polymer or oligomer that comprises functional groups that will react with silanols.

8. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 7 wherein said surface modification agent is prepared by reacting a suitable monomer with water in a solvent to form said surface modification agent.

9. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 2 wherein said solvent or co-solvent is selected from the group consisting of ethers, esters, ketones, glycol ethers, hydrocarbons, chlorinated solvents, low viscosity siloxanes and combinations thereof.

10. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 2 wherein said co-solvent is selected from the group consisting of ethers, esters, ketones, glycol ethers, hydrocarbons, chlorinated solvents, low viscosity siloxanes and combinations thereof.

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11. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 8 wherein said monomer is selected from the group consisting of a siloxane, a silazane, a silane, a carbosilane, and combinations thereof.

12. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 8 wherein said water is present in said co-solvent in a concentration ranging from about 0.05 to about 10 percent, by weight, relative to the co-solvent.

13. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 8 wherein said water is present during said reaction in proportion to said monomer in a ratio ranging from about0.50:1.5 to about 1.5:0.5, mole/mole.

14. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 8 wherein said monomer compound is selected from the group consisting of said monomer compound is selected from the group consisting of methyltriacetoxysilane, phenyltriacetoxysilane, tris(dimethlyaimino)methylsilane, tris(dimethylamino)phenylsilane, tris(diethylamino)methylsilane and combinations thereof.

15. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein the composition comprises an oligomer or polymer surface modification agent and a monomer

surface modification agent, wherein said monomer is reactive with silanol groups on said silica film.

16. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 20 wherein said silica film is pre-treated with a monomer surface modification agent, wherein said monomer is reactive with silanol groups on said silica film.

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17. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 8 further comprising adding at least one additional monomer to said solution after the water is fully reacted, wherein said monomer is reactive with silanol groups on said silica film.

18. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 15 wherein the monomer surface modification agent is an selected from the group consisting of siloxanes, silazanes, silanes, carbosilanes and combinations thereof.

19. (CURRENTLY AMENDED) The ~~dielectric~~ nanoporous silica film of claim 15 wherein the monomer surface modification agent is selected from the group consisting of acetoxytrimethylsilane, diacetoxydimethylsilane, methyltriacetoxysilane, phenyltriacetoxysilane, diphenyldiacetoxysilane, trimethylethoxysilane, trimethylmethoxysilane, 2-trimethylsiloxypent-2-ene-4-one, n-(trimethylsilyl)acetamide, 2-(trimethylsilyl) acetic acid, n-(trimethylsilyl)imidazole, trimethylsilylpropiolate, trimethylsilyl(trimethylsiloxy)-acetate, nonamethyltrisilazane, hexamethyldisilazane, hexamethyldisiloxane, trimethylsilanol, triethylsilanol, triphenylsilanol, t-butyldimethylsilanol, diphenylsilanediol, tris(dimethylamino)methylsilane, tris(dimethylamino)phenylsilane, tris(dimethylamino)silanemethyltrimethoxysilane, methyltris(methylethylkeoxime)silane. methyltrichlorosilane, and combinations thereof.

20. (CURRENTLY AMENDED) A nanoporous silica ~~dielectric~~ film produced by a process comprising the steps of reacting a suitable silica film with a composition comprising a surface modification agent, wherein said silica film is present on a substrate and wherein said reaction is

conducted under conditions and for a period of time sufficient for said surface modification agent to form a hydrophobic coating on said film and said surface modification agent comprises at least one type of oligomer or polymer reactive with silanol groups on said silica film.

21. (CURRENTLY AMENDED) The nanoporous silica ~~dielectric~~ film of claim 20 wherein a stud-test conducted on said film exhibits a film break strength of greater than 2 KPSI and a dielectric constant ranging from about 1.1 to about 3.0.

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22. (CURRENTLY AMENDED) An integrated circuit comprising at least one ~~dielectric~~ nanoporous silica film treated by reacting said silica film with a surface modification agent, wherein said reaction is conducted under conditions and for a period of time sufficient for said surface modification agent to form a hydrophobic coating on said film, and said surface modification agent comprises at least one type of oligomer or polymer reactive with silanol groups on said silica film.

23. (Original) The integrated circuit of claim 22 wherein said surface modification agent is prepared by reacting a suitable monomer with water in a solvent to form said surface modification agent.

24. (Original) The integrated circuit of claim 22 wherein said solvent or co-solvent is selected from the group consisting of ethers, esters, ketones, glycol ethers, chlorinated solvents, low viscosity siloxanes and combinations thereof.

25. (Original) The integrated circuit of claim 24 wherein said co-solvent is selected from the group consisting of ethers, esters, ketones, glycol ethers, chlorinated solvents, low viscosity siloxanes and combinations thereof.

~~25~~ 26. **(Currently Amended)** The integrated circuit of claim 23 wherein said monomer is selected from the group consisting of a siloxane, a silazane, a silane, a carbosilane, and combinations thereof.

~~26~~ 27. **(Currently Amended)** The integrated circuit of claim 23 wherein said water is present in said co-solvent in a concentration ranging from about 0.05 to about 10 percent, by weight, relative to the co-solvent.

~~27~~ 28. **(Currently Amended)** The integrated circuit of claim 26 wherein said water is present during said reaction in proportion to said monomer in a ratio ranging from about 0.50:1.5 to about 1.5:0.5, mole/mole.

~~28~~ 29. **(Currently Amended)** The integrated circuit of claim 24 wherein said monomer compound is selected from the group consisting of methyltriacetoxysilane, phenyltriacetoxysilane, tris(dimethlyaimino)methylsilane, tris(dimethylamino)phenylsilane, tris(diethylamino)methylsilane and combinations thereof.

~~29~~ 30. **(Currently Amended).** A polymer or oligomer surface modification reagent prepared by reacting a suitable monomer with water in a solvent to form said surface modification agent.

31. **(NEW)** The nanoporous silica film of claim 20 wherein the surface modification agent comprises a siloxane polymer/oligomer of Formula I, a silazane polymer/oligomer of Formula II, a silane polymer/oligomer of Formula III, or a carbosilane polymer/oligomer of Formula IV, wherein:

said siloxane polymer/oligomer has the formula:

(-SiXR-O-)n Formula I

wherein R is selected from H, alkyl, or aryl group and X is selected from one or more of the following moieties: H, acetoxy ($OCOCH_3$), enoxy (CH_2=C(CH_3)-O-Si), oxime (R_2C=N-Os-Si), alkoxy(RO-Si), amine(R_2N-Si) and/or silanol (Si-OH), and n is an integer ranging, from 2 to about 10,000, or greater;

said silazane polymer/oligomer has the formula:

$$(-SiXR_1-NR_2-)n \qquad \text{Formula II}$$

wherein R_1 and R_2 are independently selected from H, alkyl, and/or aryl, and X is selected from one or more of the following moieties: acetoxy ($OCOCH_3$), enoxy ($CH_2=C(CH_3)$-O-Si), oxime($R_2C=N$-Os-Si), alkoxy(RO-Si), and amine(R_2N-Si), and n is an integer ranging, from 2 to about 10,000, or greater;

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said silane polymer/oligomer has the formula:

$$(-SiXR-)n \qquad \text{Formula III}$$

wherein R is selected from H, alkyl, or aryl group and X is selected from one or more of the following moieties: H, acetoxy ($OCOCH_3$), enoxy ($CH_2=C(CH_3)$-O-Si), oxime($R_2C=N$-Os-Si), alkoxy(RO-Si), and amine(R_2N-Si), and n is an integer ranging, from 2 to about 10,000, or greater; and

said carbosilane polymer/oligomer has the formula:

$$(-SiR_1R_2-R_3-)_n \qquad \text{Formula IV}$$

wherein R_1 and R_2 are independently selected from H, alkyl, aryl groups, acetoxy ($OCOCH_3$), enoxy ($CH_2=C(CH_3)$-O-Si), oxime($R_2C=N$-Os-Si), alkoxy(RO-Si), or amine(R_2N-Si), and R_3 comprises a substituted or un-substituted alkylene or arylene.

32. (NEW) The nanoporous silica film of claim 20 wherein the surface modification agent is selected from the group consisting of polydimethylsilane, polyphenylmethylsilane, poly(1,2-dimethylsilzane), (1,2-dimethylsilazane)(1-methylsilazane) copolymer, N-methylsilazane resin, and combinations thereof.

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33. (NEW) The nanoporous silica film of claim 20 wherein the surface modification agent comprises a hydrolysis/condensation product of methyltriacetoxysilane.

34. (NEW) The nanoporous silica film of claim 20 wherein the surface modification agent comprises a polyacetoxysilane, a poly(methyltriacetoxy)silane, or combinations thereof.